risks of this technique. This is the classic scientific paradigm: if the current theory does not fit the data, then revise the theory; do not discount reproducible data. The strength and consistency of the observations are compelling enough to give this randomized clinical trial a chance.

***Jonathan Tobis, MD**
Babak Azarbal, MD

*Adult Cardiac Catheterization Laboratory
David Geffen School of Medicine
BL-394 CHS
University of California at Los Angeles
10833 LeConte Avenue
Los Angeles, CA 90095-1717
E-mail: Jtobis@mednet.ucla.edu

doi:10.1016/j.jacc.2005.05.030

REFERENCE

1. Azarbal B, Tobis J, Soh W, Chan V, Dao C, Gaster R. Association of interatrial shunts and migraine headaches: impact of transcatheter closure. J Am Coll Cardiol 2005;45:489–92.

Catheter Ablation After Mitral Replacement

Lang et al. (1) report their experience of transcatheter ablation of atrial fibrillation (AF) in patients with mitral valve prostheses (MVP). The investigators claim that patients in both groups were at the extreme end of the spectrum of atrial disease. However, more patients (a total of 14) had paroxysmal AF than did those with chronic AF; this does not necessarily constitute the extreme end of the disease. Did the researchers note any significant differences in the incidences of AF recurrences between those who had paroxysmal and those who had chronic AF?

Lang et al. (1) conclude that the outcomes are similar to those of standard patients undergoing catheter ablation, yet the 73% (75% in controls) sinus conversion rate falls far short of the results achieved by current surgical techniques. The need for subsequent intervention for atrial tachycardia (AT) and recurrent AF was pretty high. Given that AF circuits are unstable, what was the incidence of peri-procedural AF in these patients?

Moreover, the lines of ablation varied within as well as between the groups. Was this variation based on the findings of mapping? It would have been interesting to know what the findings of the mapping were in terms of the sites of the triggers. Given that the lines of ablation were different in these patients, how did the investigators compare the incidences of AF recurrence and AT between the two groups?

Although most studies have concentrated on the conversion to sinus rhythm, AT is emerging as a troublesome complication of most forms of intervention. It is significant that the incidence of AT was 29% in the MVP group, particularly considering that all patients in this group had specific lines of ablation to preclude AT!

Surgical scarring as a cause of AT in these patients is not a tenable explanation as none of them had preablation AT. It is more likely to be a consequence of the inability to create an adequate block at the mitral isthmus owing to the fear of damaging the prosthesis. It is well recognized that the creation of incomplete lines of block will facilitate macro-reentrant arrhythmias. This rate of sinus conversion and prevention of AT is then contingent on our ability to close the mitral isthmus adequately within these patients, without damaging the prosthesis. We clearly need to refine the ablation technique to address this issue.

None of these patients had a preprocedural diagnosis of AT, suggesting that AT was a consequence of the ablation. Are we then merely replacing one arrhythmia with another? Evidently we need to address this issue.

Notwithstanding these limitations, Lang et al. (1) are to be congratulated for achieving good results in a unique group of patients who are difficult to treat. Ostensibly, the number of such patients will be reduced in the future, as most of these patients will now have AF ablation, concomitant to mitral repair or replacement.

***Ganesh Shanmugam, MS, MCh, FRCS**

*Department of Cardiothoracic Surgery
Glasgow Royal Infirmary
Glasgow
United Kingdom
E-mail: sgunpat@hotmail.com

doi:10.1016/j.jacc.2005.05.027

REFERENCE

1. Lang CC, Santinelli V, Augello G, et al. Transcatheter radiofrequency ablation of atrial fibrillation in patients with mitral valve prostheses and enlarged atria: safety, feasibility, and efficacy. J Am Coll Cardiol 2005;45:868–72.

REPLY

We are thankful for the comments made by Dr. Shanmugam as we can further emphasize major points already addressed in the Methods and Discussion sections of our original study (1). Most of all, our goal was to establish for the first time the safety and feasibility of transcatheter ablation of atrial fibrillation (AF) in a very challenging group of patients with mitral valve prosthesis (MVP). We even performed a live satellite broadcast of such a procedure at the last Boston Atrial Fibrillation Symposium on January 14, 2005, in a patient with MVP and chronic AF, where we were able to cardiovert and maintain her into sinus rhythm from the end of the ablation until now.

In our study (1), patients with MVP had both paroxysmal AF (14 patients) and chronic AF (13 patients). Extreme end of the atrial disease was not merely based on the type of AF but on the fact that AF was highly symptomatic and refractory to at least two antiarrhythmic drugs in patients with very enlarged left atrium (55 mm). Also, the 73% (75% in the control group) maintenance rate of sinus rhythm was achieved by percutaneous transcatheter ablation in this selected group of patients. It is not rare to see AF occurrence within the first month following the ablation procedure owing to tissue inflammation, and this does not generally influence the outcomes. Some patients did not have additional lines done in the left atrium as we were in the process of assessing the benefit of these lines, as already mentioned in the original report (1). This was not due to variation in anatomic mapping. Furthermore, 81% of patients in both groups had additional lines performed along the mitral isthmus and in the posterior wall; 12% of the MVP group (vs. 13% of the control group) had only the mitral isthmus line done (again, as we were investigating the benefit of additional lines; data now published [2]), allowing us to compare outcomes in both groups. Postablation left atrial tachycardia occurred in six patients of the MVP group (one in the control group), probably to